WHAT IS CLAIMED IS:

1. An image processing apparatus for encoding image data in which a still picture frame of an image quality higher than a prescribed imaging quality is mixed in moving picture data composed of successive moving picture frames having the prescribed imaging quality, comprising:

first encoding means for encoding the moving picture frames in the moving picture data and, with regard to the still picture frame in the moving picture data, generating moving picture part data, which has a quality equivalent to that of moving picture frames, from the still picture frame and encoding the moving picture part data, thereby generating moving picture encoded data;

second encoding means for encoding difference data, which is the result of removing the moving picture part data from the still picture frame;

additional-information generating means for generating correspondence information, which correlates the moving picture part data and corresponding difference data, and identification information for specifying the moving picture part data contained in the moving picture encoded data; and

output means for outputting the moving picture frame encoded data, the difference encoded data, the correspondence information and the identification

information as result of encoding the moving picture data.

2. The apparatus according to claim 1, wherein the imaging quality is at least one of number of pixels and S/N ratio.

3. The apparatus according to claim 1, wherein said first encoding means generates the moving picture part data from the still picture frame using a discrete wavelet transform.

4. The apparatus according to claim 1, wherein said first encoding means encodes the moving picture part data using quantization steps that differ from quantization steps used in encoding the moving picture frames.

5. The apparatus according to claim 1, further comprising recording means for recording encoded results on a storage medium.

6. The apparatus according to claim 1, further comprising moving picture data generating means for generating the moving picture data.

7. An image processing apparatus for decoding the encoded results generated by the image processing apparatus set forth in claim 1, comprising:

first decoding means for decoding the moving picture frame encoded data and reproducing moving picture frames and moving picture part data;

second decoding means for decoding the difference

encoded data;

searching means, which is responsive to an externally entered command to display a still picture, for searching for the moving picture part data contained in the moving picture frame encoded data based upon the identification information; and

still picture frame reproducing means for reproducing a still picture frame using the moving picture part data retrieved and difference data, which corresponds to this moving picture part data, retrieved based upon the identification information.

8. An image processing system comprising a first image processing apparatus for encoding image data in which a still picture frame of an image quality higher than a prescribed imaging quality is mixed in moving picture data composed of successive moving picture frames having the prescribed imaging quality, and a second image processing apparatus for decoding encoded data that has been generated by said first image processing apparatus, wherein said first image processing apparatus includes:

first encoding means for encoding the moving picture frames in the moving picture data and, with regard to the still picture frame in the moving picture data, generating moving picture part data, which has a quality equivalent to that of moving picture frames, from the still picture frame and

encoding the moving picture part data, thereby generating moving picture encoded data;

second encoding means for encoding difference data, which is the result of removing the moving picture part data from the still picture frame;

additional-information generating means for generating correspondence information, which correlates the moving picture part data and corresponding difference data, and identification information for specifying the moving picture part data contained in the moving picture encoded data;

output means for outputting the moving picture frame encoded data, the difference encoded data, the correspondence information and the identification information as result of encoding the moving picture data; and

said second image processing apparatus includes:

first decoding means for decoding the moving picture frame encoded data and reproducing moving picture frame and moving picture part data;

second decoding means for decoding the difference encoded data;

searching means, which is responsive to an externally entered command to display a still picture, for searching for the moving picture part data contained in the moving picture frame encoded data based upon the identification information; and

still picture frame reproducing means for reproducing a still picture frame using the moving picture part data retrieved and difference data, which corresponds to this moving picture part data, retrieved based upon the identification information.

9. An image processing method for encoding image data in which a still picture frame of an image quality higher than a prescribed imaging quality is mixed in moving picture data composed of successive moving picture frames having the prescribed imaging quality, comprising:

a first encoding step of encoding the moving picture frames in the moving picture data and, with regard to the still picture frame in the moving picture data, generating moving picture part data, which has a quality equivalent to that of moving picture frames, from the still picture frame and encoding the moving picture part data, thereby generating moving picture encoded data;

a second encoding step of encoding difference data, which is the result of removing the moving picture part data from the still picture frame;

an additional-information generating step of generating correspondence information, which correlates the moving picture part data and corresponding difference data, and identification information for specifying the moving picture part

data contained in the moving picture encoded data; and

an output step of outputting the moving picture frame encoded data, the difference encoded data, the correspondence information and the identification information as result of encoding the moving picture data.

10. The method according to claim 9, wherein the imaging quality is at least one of number of pixels and S/N ratio.

11. The method according to claim 9, wherein said first encoding step generates the moving picture part data from the still picture frame using a discrete wavelet transform.

12. The method according to claim 9, wherein said first encoding step encodes the moving picture part data using quantization steps that differ from quantization steps used in encoding the moving picture frames.

13. The method according to claim 9, further comprising a recording step for recording encoded results on a storage medium.

14. The method according to claim 9, further comprising a moving picture data generating step of generating the moving picture data.

15. An image processing method for decoding the encoded results generated by the image processing method set forth in claim 9, comprising:

a first decoding step of decoding the moving picture frame encoded data and reproducing moving picture frames and moving picture part data;

a second decoding step of decoding the difference encoded data;

a searching step of searching, in response to an externally entered command to display a still picture, for the moving picture part data contained in the moving picture frame encoded data based upon the identification information; and

a still picture frame reproducing step of reproducing a still picture frame using the moving picture part data retrieved and difference data, which corresponds to this moving picture part data, retrieved based upon the identification information.

16. A computer program for causing a computer to function as the image processing apparatus set forth in claim 1.

17. A computer program for causing a computer to function as the image processing apparatus set forth in claim 7.

18. A computer-readable recording medium storing the computer program set forth in claim 16.

19. A computer-readable recording medium storing the computer program set forth in claim 17.